

## KNOWLEDGE PROBE 4: CONTEMPORARY WIRELESS TECHNOLOGY: CELL PHONES, WIRELESS LOCAL AREA NETWORKS, AND SHORT-RANGE RADIO

### Wireless Local Area Networks

#### Learning Objectives

1. Describe how wireless LANs work.
  2. Identify terms associated with associated with wireless communication.
  3. Describe the differences between the different 802.11 standards.
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1. The main control computer that manages a LAN is called a
    - a. Laptop
    - b. PC
    - c. PDA
    - d. Server
  2. To extend a wired LAN with wireless, you add a(n)
    - a. Access point
    - b. Network interface card
    - c. Radio beacon
    - d. Transceiver
  3. A public access point is referred to as a
    - a. Broadband wireless MAN
    - b. Hot spot
    - c. Open WLAN
    - d. Public LAN
  4. How does a public access point communicate with an ISP?
    - a. 1 gigabit Ethernet line
    - b. Fiber optic cable
    - c. Standard telephone line
    - d. T1 line
  5. In a home wireless network, what is the name of the device that connects the cable TV or DSL line to the wireless transceiver?
    - a. Modem
    - b. Network interface card
    - c. Router or gateway
    - d. Transceiver



6. What organization sets the standards for WLANs?
  - a. Institute of Electrical and Electronic Engineers
  - b. International Telecommunications Union
  - c. Telecommunications Industry Association
  - d. Wi-Fi Alliance
7. The primary wireless Ethernet standard with a maximum rate of 11 Mbps is designated
  - a. 802.11a
  - b. 802.11b
  - c. 802.11g
  - d. 802.11n
8. Which of the following does NOT operate in the 2.4 GHz band?
  - a. 802.11a
  - b. 802.11b
  - c. 802.11g
  - d. 802.11n
9. The maximum data rate of the 802.11a/g WLANs is
  - a. 5.5 Mbps
  - b. 11 Mbps
  - c. 54 Mbps
  - d. 100 Mbps
10. What causes the data rate of a WLAN to be reduced?
  - a. Extended range
  - b. High noise
  - c. Interference from other LANs
  - d. All of the above
11. What is the maximum typical range of the 802.11b/g WLANs?
  - a. 100 feet
  - b. 300 feet
  - c. 300 meters
  - d. 1-2 miles
12. What WLAN standard uses the 5.8 GHz band?
  - a. 802.11a
  - b. 802.11b
  - c. 802.11g
  - d. 802.11n



13. What is the modulation/multiplexing scheme used in 802.11a/g WLANs?
  - a. DSSS
  - b. FHSS
  - c. FSK/FDD
  - d. OFDM
14. What is the maximum data rate of the forthcoming 802.11n WLAN?
  - a. 54 Mbps
  - b. 75 Mbps
  - c. 108 Mbps
  - d. 250 Mbps
15. The primary value of the Wi-Fi Alliance testing and certification program is
  - a. Full interoperability between equipment of different vendors
  - b. Maximum speed and range are always obtained
  - c. To ensure all patent holders of the technology get paid
  - d. Vendor compliance to IEEE standards
16. WLANs can be hacked into.
  - a. True
  - b. False
17. Which of the following encryption methods are use to protect WLAN data?
  - a. WEP
  - b. WPA
  - c. 802.11i
  - d. Any of the above